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(d) Where a space is of such size that one accumulator is not sufficient, not more than two accumulators may be combined in one zone.

§ 76.33-10 Location and spacing of accumulators.

- (a) Smoke accumulators shall be located overhead in each compartment. Where liable to physical damage, the accumulators and piping shall be suitably protected.
- (b) No spot on the overhead of a protected space shall be more than 40 feet from an accumulator.
- (c) Accumulators shall not be located closer to the opening of a ventilator than three times the diameter or equivalent diameter of the opening.

§ 76.33-15 Piping.

- (a) Individual pipes shall be not less than $\frac{3}{4}$ -inch standard pipe size.
- (b) All piping, valves, and fittings of ferrous materials shall be protected inside and outside against corrosion unless specifically approved otherwise by the Commandant.
- (c) Where a smoke detecting system serves a space used alternately for liquid and dry cargo, a valve shall be installed between the tank and the detecting cabinet so that the line may be shut off when liquids are carried. When the smoke detecting system is combined with a fire extinguishing system, the operation of the valve shall not affect the operation of the fire extinguishing system.
- (d) All piping, valves, and fittings shall be securely supported, and where necessary, protected against injury. The piping shall be installed with as easy bends as practicable, and shall be installed to grade to low points for drainage.
- (e) Drains and dirt tapes shall be fitted where necessary to prevent the accumulation of dirt or moisutre.

§ 76.33-20 Operation and installation.

(a) The system shall be so arranged and installed that the presence of smoke in any of the protected spaces will automatically be indicated visually to an observer directly in front of the detecting cabinet. The visible notice shall automatically indicate the zone in which the smoke originated.

The detecting cabinet shall normally be located in the pilothouse or fire control station. On vessels over 5,000 gross tons, there shall also be an automatic audible alarm in the wheelhouse together with an auxiliary audible alarm in the engine room.

- (b) If the detecting cabinet is not located in the pilothouse or fire control station, it shall be located in convenient proximity to the valve control station of the extinguishing system. In this case, there shall be in the pilothouse or fire control station automatic visual alarms, one for each zone in which an alarm may originate, as well as an automatic audible alarm. There shall also be an auxiliary audible alarm in the engine room. For installations contracted for on or after January 1, 1962, where detecting cabinets are not located in the pilothouse or an adjacent fire control station having direct access to the pilothouse, an efficient means of direct communication shall be provided between the pilothouse and the stations where the detecting cabinets are located.
- (c) A sufficient quantity of exhaust from the detecting cabinet shall be discharged in the vicinity of the cabinet to permit the detection of fire by odor. A valve shall be installed in such space to direct the exhaust, if obnoxious, to the outside.
- (d) The smoke detecting system shall be used for no other purpose except that it may be incorporated with the fire extinguishing system to the spaces covered by the smoke detecting system.
- (e) The accumulators, detecting cabinet, interconnecting valves with the fire extinguishing system, alarms, and indicating devices shall be of an approved type.
- (f) All wiring and electrical circuits and equipment shall meet the applicable requirements of subchapter J (Electrical Engineering) of this chapter.
- (g) A framed chart or diagram shall be installed adjacent to the detecting cabinet and auxiliary panel indicating the location of the various zones and giving instructions for the operation, maintenance, and testing of the system. The chart at the cabinet location or a separate card or booklet to be kept near the chart, shall have tabulated